§ 179.221 Individual specification requirements applicable to tank car tanks consisting of an inner container supported within an outer shell.

§ 179.221–1 Individual specification requirements.

In addition to § 179.220, the individual specification requirements are as follows:

DOT specification	Insulation	Bursting pressure (psig)	Minimum plate thickness (inches)	Test pressure (psig)	Bottom outlet	Bottom washout	Reference (179.221–***)
115A60ALW	Yes	240	3/16	60	Optional.	Optional	
115A60W1	Yes	240	1/8	60	Optional	Optional	1
115A60W6	Yes	240	1/8	60	Optional	Optional	1

[Amdt. 170–52, 61 FR 28681, June 5, 1996, as amended at 62 FR 51561, Oct. 1, 1997; 66 FR 45390, Aug. 28, 2001]

Subpart E—Specifications for Multi-Unit Tank Car Tanks (Classes DOT–106A and 110AW)

§ 179.300 General specifications applicable to multi-unit tank car tanks designed to be removed from car structure for filling and emptying (Classes DOT–106A and 110AW).

§ 179.300–1 Tanks built under these specifications shall meet the requirements of § 179.300, § 179.301 and when applicable, § 179.302.

§ 179.300–3 Type and general requirements.

(a) Tanks built under this specification shall be cylindrical, circular in cross section, and shall have heads of approved design. All openings shall be located in the heads.

(b) Each tank shall have a water capacity of at least 1500 pounds and not more than 2600 pounds.

(c) For tanks made in foreign countries, a chemical analysis of materials and all tests as specified shall be carried out within the limits of the United States under the supervision of a competent and impartial inspector.

§ 179.300–4 Insulation.

(a) Tanks shall not be insulated.

(b) [Reserved]

§ 179.300–6 Thickness of plates.

(a) For class DOT–110A tanks, the wall thickness after forming of the cylindrical portion of the tank must not be less than that specified in § 179.301 nor that calculated by the following formula:

$$t = \frac{Pd}{2SE}$$

Where:

d = inside diameter in inches;
E = 1.0 welded joint efficiency;
P = minimum required bursting pressure in psig;
S = minimum tensile strength of plate material in p.s.i. as prescribed in § 179.300–7;
t = minimum thickness of plate material in inches after forming.

(b) For class DOT–106A tanks, the wall thickness of the cylindrical portion of the tank shall not be less than that specified in § 179.301 and shall be such that at the tank test pressure the maximum fiber stress in the wall of the tank will not exceed 15,750 p.s.i. as calculated by the following formula:

$s = [p(1.3D^2 + 0.4d^2)] / (D^2 - d^2)$

where:

d = inside diameter in inches;
D = outside diameter in inches;
p = tank test pressure in psig;
s = wall stress in psig

(c) If plates are clad with material having tensile strength at least equal to the base plate, the cladding may be